

Appl. No. 10/696,043
Amdt. Dated November 14, 2006
Reply to Office Action of August 23, 2006

Attorney Docket No. 83394.0017
Customer No.: 26021

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REMARKS

This application has been carefully reviewed in light of the Office Action dated August 23, 2006. Claims 1-32 remain in this application. Claims 1 and 21 are the independent Claims. It is believed that no new matter is involved in the arguments presented herein. Reconsideration and entrance of the amendment in the application are respectfully requested.

Allowable Subject Matter

On page 7 of the Office Action, Claims 6-12, 16, 19-20 and 27-29 were indicated to be allowable if re-written in independent form to include all of the limitations of the base claim and any intervening claims. Applicant thanks the Examiner and formally recognizes the allowable subject matter of Claims 6-12, 16, 19-20 and 27-29.

Art-Based Rejections

Claims 1, 2, 4, 5-13, 15, 17, 18, 21-23, 25 and 26 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 7,030,945 (Umemoto); Claims 3 and 14 were rejected under 35 U.S.C. § 103(a) over Umemoto in view of U.S. Publication No. 2004/0240232 (Choi); Claim 24 was rejected under 103(a) over Umemoto in view of U.S. Publication No. 2005/0030630 (Ohnishi).

Applicant respectfully traverses the rejections and submits that the claims herein are patentable in light of the arguments below.

The Umemoto Reference

Umemoto is directed to an optical path control layer with a plurality of optical path changing slopes inclined at an angle of 35 to 48 degrees with respect to

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a back side substrate. Light source units are provided in parallel to the back side transparent substrate. (See *Umemoto; Abstract, FIG. 2*)

The Choi Reference

Choi is directed to a back light of a liquid crystal display panel adapted to allow light entering from the side to exit in a direction perpendicular to the light unit. (See *Choi; Abstract*)

The Ohnishi Reference

Ohnishi is directed to a reflection film for a back light optical system for a liquid crystal display. (See *Ohnishi; Paragraph [0001]*)

The Claims are Patentable Over the Cited References

The present application is generally directed to an illumination device.

As defined by independent Claim 1, an illumination device having a light pipe of substantially parallel flat-form sheet, of which one surface is an outgoing light surface is provided. A light source unit is placed along one side edge and opposite both side edges. A light axis of lights unparallel to the outgoing light surface of the light pipe is provided after the lights have entered the light pipe from the light source. A reflection body consisting of a plurality of reflection bodies is divided into *m* in a vertical direction of the light source unit and is provided at an opposite side surface of the outgoing light surface of the light pipe. In a reflection surface existing inside the unit reflection bodies, reflecting lights are provided which have entered within the reflection body from inside the light pipe in contacting the light pipe in the outgoing light surface direction of the light pipe. The reflection body unit can contact and separate from the opposite side surface of

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the outgoing light surface of the light pipe for every unit reflection body provided. Each reflection body having a plurality of reflection body units is composed of material substantially equal in refractive index to the light pipe.

The applied references do not disclose or suggest the features of the present invention as defined by independent Claim 1. In particular, the applied references do not disclose or suggest "wherein said reflection body unit can contact and separate from the opposite side surface," as required by independent Claim 1.

In FIG. 1, Umemoto discloses optical path control layer 4 with optical path changing slopes A1 having inclinations between 35 to 48 degrees. However, FIG. 1 clearly shows that while the inclinations of slope A1 may vary, the optical path control layer 4 is fixed and not able to *contact and separate from the opposite side surface* as required by independent Claim 1.

The present invention discloses that "the reflection body unit enables each divided unit reflection body to contact and separate from the light pipe." (See *Yamamoto; Paragraph [0008]*). Electromagnetic actuator 105 allows the unit reflection body 103 to contact and separate from the light pipe. The electromagnetic actuator 105 converts electric signals to positional movement using an electro-magnet and a magnet. (See *Yamamoto; Paragraph [0053]*). Umemoto does not disclose this feature.

Moreover, the applied references do not disclose or suggest a "light axis of lights unparallel to the outgoing light surface of the light pipe," as required by independent Claim 1.

In FIGS. 1-5, Umemoto discloses light source 5 in parallel with the back side transparent substrate 10. In contrast, Claim 2 requires a light axis of lights unparallel to the outgoing light surface of the light pipe as shown in FIG. 2 wherein

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a light source unit 101 forms an angle Φ with respect to light pipe 102 such that the light source 5 is not in parallel to light pipe 102.

Thus, Umemoto does not disclose or suggest these features of the present invention as required by independent Claim 1, and the ancillary references do not remedy the deficiencies of Umemoto.

Since the cited reference fails to disclose, teach or suggest the above features recited in independent Claim 1, the reference cannot be said to anticipate nor render obvious the invention which is the subject matter of that claim. Accordingly, Claim 1 is believed to be in condition for allowance and such allowance is respectfully requested.

Applicant respectfully submits that independent Claim 21 is allowable for at least the same reasons as discussed above with reference to independent Claim 1 and such allowance is respectfully requested.

The remaining Claims 2-20 and 22-32 depend directly or indirectly from independent Claims 1 and 21 and recite additional features of the present invention which are neither disclosed nor fairly suggested by the applied references and are also believed to be in condition for allowance and such allowance is respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los

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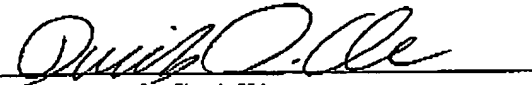
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Angeles, California telephone number (310) 785-4721 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: November 14, 2006

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